

# Outpatient follow-up in women with HIV infection in Parkside Health Authority (UK)

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## Abstract

**Objective**—To describe patterns of attendance for follow-up among HIV infected women in Parkside, UK and their correlates.

**Design**—Retrospective cohort study.

**Subjects**—103 HIV infected women.

**Main outcome measures**—Whether patients attended for follow-up between three and 18 months.

**Results**—31% of women were married and 46% had children. Women born in sub-Saharan Africa were significantly less likely to attend for follow-up after three months (56%) than women born in other areas who had acquired HIV either heterosexually (82%) or through injecting drug use (81%). This pattern persisted on multivariate analysis controlling for whether women were symptomatic, had had a previous positive test, were married or had children.

**Conclusions**—HIV positive sub-Saharan African women are less likely to re-attend for follow-up than women with heterosexually acquired HIV from other areas or those who acquired infection through intravenous drug use. Further studies are needed to identify barriers to follow-up for women and to shape the development of more appropriate and accessible services for HIV infected women, especially those of sub-Saharan African origin.

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## Introduction

Recent reports suggest that there has been a marked increase in heterosexually acquired Human Immunodeficiency Virus (HIV) in England, Wales and Northern Ireland, especially in London.<sup>1-4</sup> The available evidence suggests that, in the majority of cases, these infections are acquired through heterosexual intercourse abroad (mostly in Africa).<sup>1-5</sup> Patients from sub-Saharan Africa appear to represent a substantial proportion of infected individuals identified so far in London.<sup>2-4</sup>

The Government's recent White Paper<sup>6</sup> has identified HIV/AIDS and Sexual Health as a key area within the national strategy for improving the health of the nation. The philosophy of the White Paper is to match targets with a strategy through which they might be achieved. The recommendations of the national *Health of the Nation* focus group on

HIV/AIDS and Sexual Health<sup>6</sup> give particular emphasis to the importance of providing accessible services which match the particular needs of different local groups.

Regular follow-up of HIV infected individuals is important in achieving adequate clinical management and health promotion and may be particularly important in women of reproductive age. Clinical monitoring of HIV infected patients has been shown to be beneficial in reducing the associated morbidity and earlier mortality.<sup>7,8</sup> It has been suggested that patients of sub-Saharan African origin may be less likely to attend for follow-up. We reviewed our experience with HIV infected women in Parkside District Health Authority to examine the patterns and determinants of attendance for follow-up.

## Patients and methods

One hundred and three women who presented to the Jefferiss Wing Genitourinary medicine (GUM) clinic or to the Patrick Clements GUM clinic in Parkside Health Authority between March 1986 and March 1991 were identified. All these women tested positive for HIV antibodies at presentation or were known to be HIV antibody positive by prior test. This represented a complete sample of such women identified by the two clinic registers.

Between June and December 1992 clinical records were obtained for all patients. Information was collected on country of birth, age, history of risk behaviour and HIV-1 antibody tests, Center for Disease Control (CDC) stage of disease,<sup>9</sup> marital status, and whether or not the woman had children. The most likely mode of HIV-1 transmission was identified from the history of risk behaviour documented at the time of HIV testing. Information on country of birth was not available in one patient. In addition it was noted whether the patient had attended at any time between 90 days and 546 days subsequent to first presentation. Where this was the case they were classified as being in follow-up between three and 18 months. In all cases patient notes were viewed at least 18 months after the patient had presented.

Women were divided into three study groups for the purposes of analysis: women born in sub-Saharan Africa who had acquired HIV infection heterosexually (SSA), women born outside sub-Saharan Africa who had acquired HIV infection heterosexually (Non SSA), and women born outside sub-Saharan

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Africa who had acquired HIV infection through injecting drug use (IDU).

Women classified as CDC disease stage IV were designated as having symptomatic HIV infection. The remaining women were designated as not having symptomatic HIV infection.

Data analyses were performed using SAS and EGRET statistical software. Chi square has been used throughout to test the differences between proportions. Logistic regression was used for the multivariate analysis.

## Results

Of the 103 women, 74 (72%) attended for follow-up between 3 and 18 months. The median age was 26 years. Thirty two (31%) were married, and 47 (46%) had children. Thirteen (13%) had symptomatic HIV infection, and 47 (46%) had had an HIV test prior to presentation. Forty (39%) were sub-Saharan African, 28 (27%) were non sub-Saharan African who had acquired HIV heterosexually, and 34 (33%) had acquired HIV through injecting drug use. We examined the relationship between the characteristics of women and follow-up attendance (table 1).

The proportion of sub-Saharan African women attending for follow-up between three and 18 months was significantly smaller than that among both non sub-Saharan African women who had acquired infection heterosexually and women who had acquired infection through injecting drugs ( $p < 0.03$ ). Married women were less likely to attend for follow-up, although the difference did not

reach significance ( $p = 0.098$ ). There were no differences between symptomatic and asymptomatic women or between those with and without children in proportions followed up. The median age for both attenders and non-attenders for follow-up was 26 years.

We compared the characteristics of women between the three study groups (table 2). Sub-Saharan African women were four times more likely to be married ( $p < 0.005$ ; chi square [1df] = 8.19) and more than twice as likely to have children ( $p < 0.005$ ; chi square [1df] = 9.45) than women who had acquired infection through injecting drug use. They were also less likely to have had an HIV test prior to presentation at the clinic than both the non sub-Saharan African women who had heterosexually acquired HIV ( $p < 0.05$ ; chi square [1df] = 4.40) and the non Sub-Saharan African group who acquired HIV through injecting drug use ( $p < 0.001$ ; chi square [1df] = 13.48). There were no other significant differences between the three groups in the parameters recorded (table 2).

In order to assess the influence of child care and other domestic responsibilities, disease stage, and prior positive HIV antibody test on the differential follow-up rates, we carried out a multivariate analysis by logistic regression using attendance as the outcome variable. In addition to study group, we included the variables for marital status, whether or not the women had children or symptoms, and prior positive HIV antibody test as independent terms in the model. For the patient groups odds ratios for attendance were calculated against baseline attendance odds for the sub-Saharan African group. Both the non sub-Saharan group who acquired HIV heterosexually and the group who acquired HIV through injecting drug use were significantly more likely to attend than the sub-Saharan African group; for the non sub-Saharan group OR = 3.81 (95% CI:1.08-13.4,  $p < 0.04$ ), and for those with HIV acquired through injecting drug use OR = 3.79 (95% CI:1.00-14.3,  $p = 0.05$ ). No other variable was significantly related to attendance.

## Discussion

We have reported follow-up and characteristics of all women who were known or diagnosed to be infected with HIV when they presented to two Parkside Genitourinary Medicine clinics between March 1986 and March 1991. Overall 28% of women did not attend for follow-up at any time during the period studied. Only 52% of women of sub-Saharan African origin attended the clinics during the follow-up period, compared with 82% of non sub-Saharan African women who had acquired infection heterosexually and 83% of non sub-Saharan African women who had acquired infection through injecting drug use. Although sub-Saharan African women were more likely to be married and to have children, and less likely to have had a prior positive HIV test than the other groups, these

Table 1 Follow-up attendance by features of subjects

	N	No. (%) in follow-up 3-18 months
Group:		
SSA	40	23 (57)
Non SSA	28	23 (82)
IDU	34	28 (83)
Married:		
Yes	32	19 (59)
No	71	55 (77)
Children:		
Yes	47	33 (70)
No	55	40 (73)
Symptoms of HIV:		
Yes	13	11 (85)
No	90	63 (70)
Previous HIV test:		
Yes	47	34 (72)
No	56	40 (72)

$p < 0.03$ : Chi square (2) = 7.48

Table 2 Features of subjects by study group

	Sub Saharan African (SSA)	Non SSA/ non IDU	IDU
No. of subjects	40	28	34
Median age (years)	26	31	27
No. (%) married	18 (45)	9 (32)	4 (12)
No. (%) with children	26 (65)	11 (41)	9 (26)
No. (%) with HIV associated symptoms	4 (10)	4 (14)	5 (14)
No. (%) with previous HIV test	9 (23)	14 (50)	23 (68)

did not explain the differences in follow-up observed between the groups.

Recent evidence suggests that the provision of health services for HIV seropositive patients may be poorly geared for women.<sup>10 11</sup> Our findings emphasise the substantial proportions of HIV antibody positive women who are married (31%) and who have children (46%), although neither these factors, nor having symptoms of HIV infection or a prior positive HIV antibody test seem to influence attendance for follow-up. Women attending a genitourinary medicine clinic in London have expressed a preference for an all-female staffed multidisciplinary outpatient service.<sup>10</sup> Experience from one such service suggests that women diagnosed HIV antibody positive at the all-woman clinic show significantly higher rates of follow-up than those achieved among women diagnosed positive at a general GUM clinic.<sup>11</sup> HIV antibody positive women have particular requirements for health care services which differ from those of HIV positive homosexual men; for example, obstetric, gynaecological and family planning services, the provision of creche facilities for children, and health care for those children that may also be infected with HIV.

We cannot say from this study why the poor rate of follow-up in sub-Saharan female patients should have occurred. Explanations may include cultural barriers, attendance at other clinics or travel abroad, greater preference for all-female staff, language difficulties, or greater social and work commitments. In particular, problems in the availability of medical care in patients' country of origin may lead to quite different perceptions of the degree of extremity of illness at which it is appropriate to seek medical care. Furthermore, the benefits of seeking care early may

not be adequately appreciated.

We are concerned that HIV infected women may not be gaining access to appropriate health care. Greater efforts are required to ensure that appropriate messages and information about potential benefit of regular care are given during pre and post test counselling. In addition further studies are required to identify women's needs and the barriers to their attendance which will help us define the shape of more accessible and appropriate services provisions for these women. Given the increasing number of women who are identified as HIV antibody positive who are from sub-Saharan Africa, a particular focus on the needs of this group is urgently needed.

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